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9. ABSTRACT

The main purpose of this study is to assess data availability and problems with data for future research in collaboration with the joint Princeton University/Brookings Institution project on income distribution in developing countries. This report covers three geographically proximate Asian countries -- Korea, the Philippines and Taiwan.

Following the guidelines provided by the project, this survey consists of three major parts. First, existing studies on income distribution for the three countries are briefly reviewed with emphasis on methodology and on conclusions and findings. Secondly, availability of, and problems with, data relating to income distribution are examined carefully, noting the differences in definitions and classifications among these countries. Also an effort is made to assess the availability of data for consistency checks and for specific interest areas of the joint project.

The last chapter deals with some suggestions for particular lines of inquiry for future research, especially in connection with problems of data sources and in view of existing studies on income distribution for this region.

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Review of Income Distribution Data:

Korea, the Philippines and Taiwan

by

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I. A REVIEW OF EXISTING STUDIES ON INCOME DISTRIBUTION

Although there prevails wide interest in, and recognition of, the problems of income distribution, there are only a limited number of empirical studies on income distribution pertaining to Korea, the Philippines and Taiwan. Of these, some show a great deal of care in choosing methodology and in dealing with data, while others do not indicate sources of data nor their limitations. Some are yet in preliminary form while the others have been published as articles or monographs. There are two comparative studies on income distribution including these three countries, though they are not mutually exclusive. The first one is Professor Harry T. Oshima's article on "Income Inequality and Economic Growth".[1/] The other one is a preliminary report edited by Hollis Chenery, John Duloy and Richard Jolly for the World Bank.[2/]

In the study by Professor Oshima, the U.S. and seven Asian countries are compared. Following rather lengthy discussions of various measures of over-all size-distribution of family income, he devises what he calls an index of decile inequality in an effort to ease the bias of the Gini concentration ratio toward extreme values.[3/] His improvised methodology may be briefly summarized as follows: for the index of decile inequality (DI),

$$DI = \frac{\Sigma|d|/10}{18}$$

where d: the deviation of each decile share of income from perfect equality.

The contribution by the actual mean to inequality (CI) is:

$$CI = \Sigma f\ [X - \bar{X}_n] - \Sigma f\ [X + Y) - (\bar{X}_s + Y)],$$

where f : frequencies;

X_s : the average income of each class interval in the sector distribution;

$\bar{X}_n$: the mean of the national distribution; and

Y : the difference between $\bar{X}_n$ and the mean of the actual sector distribution.

The data used by Professor Oshima, who is very careful and articulate with data, are family income and expenditures surveys by the government agencies, except for Korea. The sample survey results for the Philippines and Taiwan are more comparable since these surveys included large stratified samples of all registered families and single-person-households. Critical assessment of data used for the Philippines and Taiwan will be attempted in the following chapter, when we examine data availability. The Korean data is based on a special stratified random sample survey of 800 urban households and 1,000 rural households specifically conducted by the Institute of Social Science, Chung-Ang University.[4/] An evaluation of data sources of this survey for Korea will be attempted toward the end of this chapter, dealing with Korean income distribution studies, in order to avoid the risk of repetition. Using the methodology and data, the indicators of income distributions for the three countries are as follows:[5/]

	Year	Index of Decile Inequality	Gini Coefficient
Korea	1966	.21	-
Philippines	1965	.26	.36
Taiwan	1964	.41	.51

In an attempt to identify the major sources of inequality, the distribution of income is broken down into rural and urban sectors, allowing measurement of sector deviations and the contribution of sector means to the size-distribution of family incomes for these countries. Based on the preceding analysis, he "found that the greater inequality of South and Asian countries is found in the means and frequencies of the rural distributions and the wide dispersions in the urban distributions."[6/]

In the case of the Philippines, the rural sector and the rural mean contributed to the national deviation or inequality by 54% and 17% respectively in 1965 while the Taiwan rural sector's and mean contribution were 38% and 0.5% in 1964. On the other hand, the contribution of the urban sector to national inequality is wholly due to the dispersion or curvature of the distribution accounting for 90% and 51% in the Philippines and Taiwan, respectively.[7/] The figures for Korea were not presented because of the inadequacy of data as will be indicated later.

In the report jointly prepared by the Development Research Center of IBRD and the Institute of Development Studies of the University of Sussex, there are two chapters, one by M. Ahluwapia and another one by Ahluwapia and Chenery, presenting the levels of inequality in income distribution for various countries including both capitalist and socialist societies.[8/] The first chapter presents two measures of inequality for cross-section analysis while two other measures for comparative analysis are computed in the latter chapter. The former two are the well-known GINI coefficient and the ratio of the bottom 40 percent to the top 20 percent. The latter two are the annual increases in welfare in terms of equal and poverty weights.

The following table shows a summary of distributive measures presented in this report for the countries with which we are concerned.

Table 1. Income Distribution and Growth Indicators

Country	Year	Ratio of bottom 40 percent to top 20 percent	GINI
Korea	1970	18.0/45.0	.36
Philippines	1965	11.6/55.4	.50
Taiwan	1964	20.4/40.1	.32

Country	Period	Income Growth			Annual Increase in Welfare		
		Upper 20%	Middle 40%	Lowest 40%	GNP Weights	Equal Weights	Poverty Weights
Korea	1964-70	12.4	9.5	11.0	11.0	10.7	10.5
Philippines	1961-65	5.0	6.7	4.4	5.5	5.4	5.2
Taiwan	1953-61	4.5	9.1	12.1	6.8	9.4	11.1

Source: Chenery et. al., pp. (2) 4 and (3) 6

Based on the cross section analysis, three broad conclusions on the pattern of income distribution between countries are drawn.[9/] First, the socialist countries have the highest degree of equality, as expected. Secondly, the developed countries are on the whole more equal than most underdeveloped countries. Lastly, the developing countries vary considerably in the degree of equality in the distribution of income. Over a period of time, the IBRD-Sussex team finds that in some growth countries performance is notably worse when measured by weighted indices while other countries such as Sri Lanka, El Salvador, Columbia and Taiwan show the

weighted indices higher than GNP growth. The rates of GNP growth for Korea, Costa Rica, Yugoslavia, Philippines and Peru are not affected by the use of weighted indices to any greater extent.[10/]

As for the methodology being adopted in this study, there does not seem to be any major innovation, except to apply commonly and extensively used measures to numerous countries. It is, to this reviewer's knowledge, the first study of its kind to be so extensive in its coverage.

The data sources of this global study, especially those for the three countries germane to this report, deserve some further note. Data for Korea and the Philippines are based on Christian Morrison's papers, which, in turn, relied on the annual report of the family income and expenditure survey by the Bureau of Statistics, Economic Planning Board, and the farm household survey by the Ministry of Agriculture and Forestry for Korea, and the Bureau of Census and Statistics Survey of Households for the Philippines. For Taiwan, Professor Oshima's data is directly quoted without any modifications. The problems with the data sources for these three countries will be specifically indicated in the following chapter.

1. The Philippine Studies

Turning to the country studies of income distribution, there are three studies directly relevant to the problems of income distribution in the case of the Philippines.

A paper by Parel examines the effect of urbanization and geographical location on family income.[11/] The data base of this study is the third national survey on family income and expenditures by the Bureau

of Census and Statistics conducted in 1966. By fitting log-normal distribution to class income by "type of area" and by region, variance analysis is made to determine the factors affecting the differences in size distribution of income. The study finds that the level of development of the region as a factor in family income is very highly significant. Also, a significant interaction between "regions" and "type of areas" was found to exist, although it is not as highly significant as the two factors.[12/]

More recently, T. Mijares and I.C. Belarmino attempted to clarify the sources of income disparities among Philippine families in an intertemporal analysis of family income and expenditure surveys for 1961 and 1971.[13/] In addition to comparing relative shares of income classes, they present some of the most common quantitative measures of income inequality for the two bench-mark years as follows:[14/]

	1961	1972
Concentration Ratio (Gini Index)	0.515	0.481
Pareto's Constant	1.443	1.206
Mean/Median Ratio	1.63	1.52

An improvement in the concentration ratio and a deterioration in Pareto's constant over time are primarily attributable to comparatively significant increases in the average income of families in the higher third and fourth quintiles. It is also reflected in the mean/median ratio representing the skewness of distribution.

The sources of income disparities are sought in this study in terms of Gini indices for different income classes, urban vs. rural families (including metropolitan Manila and other urban areas), regional

comparisons and sources of family income. Other sources of income disparities noted are size of family, number of income earners in the family, educational attainment of members and head of the family and the age-distribution structure of family members. However, what they have shown in their study is simply partial analysis of various sources of disparities without decomposing the shares of disparity attributable to a specific "source" of disparity. Thus, the article ends with an apologetic paragraph that reads as follows:

> The extent to which the above factors influences income disparities among family groups in the Philippines is a subject of an on-going study of the Bureau of the Census and Statistics. It is hoped that the contribution of each of the above-mentioned factors could be quantified and their significance properly determined.15/

Although it is somewhat out-dated, there is an interesting study by the Joint Legislative-Executive Tax Commission on tax burden by income class for the Philippines.16/ The type of study does not exist in Korea or Taiwan. The study was based on a sample survey of family income and expenditures on selected commodities and on tax data obtained from the Bureau of Internal Revenue, Bureau of Customs, General Auditing Office and other government agencies. The total number of families were classified into thirteen income classes, ranging from less than ₱500 to ₱10,000 and over, and taxes were classified into two broad groups -- taxes on production and sales, and taxes on income and property. This classification avoided the difficulties in terminology that arise with respect to the distinction between direct and indirect taxes.

The tax on income and property was apportioned among the various income classes according to the level of income earned or property owned. On the other hand, the taxes on production and sales were allocated according to the pattern of expenditures of the households on taxable commodities. Taxes paid by both the business and household sectors were, the Commission maintains, properly apportioned between them whenever possible. Otherwise, the entire amount of tax was allocated to the sector which paid the greater portion of the tax. Then, an allocation factor for each tax was devised, taking into account the various factors affecting tax shifting, such as market structure, cost conditions, and elasticities and other external influences. Also, the average money burden and the effective rate for each income class are estimated, respectively defined as the tax burden per household and the ratio of total taxes paid to gross income.

With regard to the redistributive effects of taxes, the study shows that taxes on income and property are progressive with an effective rate ranging from 2.5% for the low income class to 21.8% for the highest income class. Consequently, the income distribution before and after the imposition of the taxes on income and property showed redistribution from the higher income group to the lower, although the redistributive effect is not very significant because of the low effective tax rates on income and property as a whole.[17/] The taxes on production and sales are found to be, as expected, regressive in general with effective rates ranging from 16.0% for the lowest income group to 12.2% for the highest.[18/] Combining the two broad categories of taxes, the over-all effects of taxes

on the distribution of income is marginally salutary as shown in the table below.

Table 2. Redistributive Effects of Tax in the Philippines

Cumulative percentage of households	Cumulative Percentage of Income: Before all taxes	After all taxes	After taxes on income and property	After taxes on production and sales
Lower 20	4.2	4.6	4.9	3.9
Lower 50	17.3	17.9	18.2	16.7
Lower 90	57.8	59.7	60.2	57.2
Upper 10	42.2	40.3	39.8	42.8

Source: Joint Legislative-Executive Tax Commission, A Study of Tax Burden: by Income Class in the Philippines, (1964), p. 66

There are some questions as to the procedures used in apportioning various taxes to different income classes proportionately or in lumps in determining the tax burden. In addition, because the sample for this study is selected to avoid the households included as the sample for the 1961 household income expenditure survey, [19] and because of the difference in the year of the two surveys, it is extremely difficult to relate the results of this survey to the household income and expenditure survey of 1961.

As a follow-up, a mimeographed paper by Ruben F. Trinidad of the National Tax Research Center of the Philippines (formerly of the Joint Legislative-Executive Tax Commission) makes a broad description of tax policy measures introduced, especially after the Marshall law, to promote distributive equity.[20] However, this work does not contain much analysis, or as rigorous, as the earlier work by the Commission.

More recently, the National Tax Research Center published an initial mimeographed report on tax burden by income class for 1971 [21] updating its earlier study for 1960 with available data and following closely the earlier methodology of distributing the tax burden by income class. For this reason, this study is also subject to aforementioned methodological criticisms. The findings of this initial report are summarized in Table 3. As compared to Table 2, the redistributive effects of tax policies may be noticed in the improvement of the relative share of the upper middle class; namely, that between fifth and ninth deciles. It seems from the table that an insignificant level of overall income redistribution resulted from the use of tax policies. Specifically, taxes on income and property have mildly and favorably affected redistribution of income from the high-income group to the low and middle-income groups. However, this positive redistributive effect is mostly negated by adverse effect from taxes on production and sales.

Table 3. Lorenz Curve Before and After Taxes

Cumulative percentage of households	Cumulative Percentage of Income			
	Before all taxes	After all taxes	After taxes on income and property	After taxes on production and sales
Lower 20	4.2	3.2	4.1	3.1
Lower 50	17.8	17.1	18.7	16.3
Lower 90	63.1	64.8	65.8	61.7
Upper 10	36.9	35.2	34.2	38.3

Source: National Tax Research Center, A Study of Tax Burden by Income Class in the Philippines, (An Initial Report, 1974), p. 3.

There are at least two on-going studies on income distributions financed by the International Labor Organization. According to an ILO research report,[22] Professor Jose Encarnacion of University of the Philippines is making an attempt to analyze the relative contributions of different factors to income inequality, measuring income inequality by the variance of income logarithms.[23] The factors included in his study are educational level, age, "class of worker", place of residence and number of hours of the employed and the self-employed, among others. Also, it will deal with the differential incidence of wives entering the labor force for classes of workers and levels of income. Another study undertaken by Professor Edita Tan,[24] attempts to investigate the tax incidence and the distribution of various government services and their effect on the size-distribution of income of various family groups. These studies are expected to be completed in September, 1974, and February, 1975, respectively and they will certainly be valuable additions.

2. Studies on Taiwan

Turning to Taiwan, there are two references with regard to the Taiwanese income distribution. Professor Shirley W.Y. Kuo in her study of "The Economic Structure of Taiwan, 1952-69" made a brief reference to income distribution. Her main concern lies in clarifying the consumption patterns. In doing so, income distribution and consumption by occupation for 1966 and the Lorenz curves of farmers and non-farmers for 1964 and 1966 are derived. She finds that the four curves fall almost on top of one another due to insignificant change during the period of comparison and to no difference between farm and non-farm income groups.[25] However,

she adds a speculation as to the possibility of exclusion and underestimation of the income of the highest non-farm income class.[26/]

A study by J.J. Liu of Academia Sinica is more substantial.[27/] Since this mimeographed report is written in Chinese, with no summary in English, the assessment of it in this section may not be adequate because of the inadequacy of this reporter's proficiency in Chinese. The following evaluation is strictly based on my understanding of Chinese characters and analysis of the tables. Following a brief theoretical examination of the factors affecting income distribution and the relation between income distribution and economic growth, Liu attempted cross-section and time series analysis of income distribution in Taiwan. In his analysis, the data utilized are the results of household surveys for 1964, 1966, 1968 and 1970. The measures of income distribution adopted by J.J. Liu are, again, those most commonly used, (i.e., the Gini coefficient, Harry T. Oshima's index of decile inequality and the ratio of the shares of top 10 [or 20] percent to that of bottom 10 [or 20] percent for the years concerned). Table 4 shows the summary of Liu's findings.[28/]

Table 4. Measures of Income Distribution in Taiwan

	1964	1966	1968	1970
Gini Coefficient	0.36	0.36	0.36	0.326
The index of decile inequality	0.26	0.26	0.26	0.235
The ratio of the income share of top 10% to that of bottom 10%	8.63	6.80	8.45	/.177
The ratio of the income share of top 20% to that of bottom 20%	5.33	5.23	5.28	4.584

Source: Liu, Op. Cit., pp. 102-3.

These indicators are computed separately for both farm and non-farm households and by the classification of cities, municipalities and localities. However, there is no significant difference between the farm and non-farm households. Yet, there seems to be a wider dispersion among cities, municipalities and localities.

As will be noted in the following chapter, the household income and expenditure survey in Taiwan is most comprehensive and detailed. Therefore, this type of study would be rather easy in the case of Taiwan.

3. On Korean Income Distribution Studies.

There are two empirical studies on Korean income distribution to date. The most widely quoted one is a study by the Institute of Social Sciences, Chung-ang University as an EPB-USOM project.[29/] To this reporter's surprise, both the interim and final reports of this project on income distribution and consumption patterns did not contain a sound statistical basis warranting such a wide use and recognition. As a result of this study, two measures of income distribution for urban and rural sector are computed as follows:[30/]

	Urban	Rural
Gini Coefficient	0.299	0.301
Pareto Coefficient	-0.085	-0.319

In addition, this study concludes that the redistributive effects of taxes is insignificant for both the urban and rural sectors.

In reviewing the final report, there seem to be some serious defects in the survey and methodology. The problems in defining household

to exclude single-person household and rural household without arable land, without making a clear distinction between household and business such as owner-restaurant and owner-inn, as noted by Professor Harry T. Oshima, are only minor ones. In contrast to Professor Oshima's understanding, the figures in this study are the monthly averages of January to March, 1966, not the monthly averages covering January, April, July and October of 1964.[31/] The sample sizes are rather small, 971 rural and 799 urban households. The breakdown of the sample by occupation leaves some doubt as to the validity of the urban household sample. This report gives a breakdown of 211 households in commerce, 228 households of salary and wage earners, and 15 proprietor households, which leaves some 300 households in the urban sector unaccounted for, without any clarification whatsoever.[32/] Furthermore, in classifying income groups for the rural sector, income in kind is recognized and computed. However, the classification of rural income adopted in this report is solely based on cash income,[33/] which leads inevitably to misclassification and inconsistency in deriving frequency distribution.

In contrast to our expectation the Lorenz curve for the rural sector is found to be more inequitable than that for the urban sector.[34/] This may also be attributable to the dubious composition of urban households by occupations as noted above. Underestimation of the concentration ratio might also be due to the fact that the averages in this report are monthly, not annual. If these figures are blown up to represent annual income, the relative shares of higher income classes would further increase and consequently, the concentration ratio would be adversely affected. In short, if the defects of this study are properly recognized,

then its findings should not be accepted unconditionally and widely quoted, simply to force an international comparison.

Another study on Korean income distribution is a short case study of Korean income distribution by Irma Adelman of University of Maryland, used in the IBRD-Sussex study.[35/] She does not, however, present any measure for income disparity, but presents only the decile distribution of income by categories for 1964 and 1970. Based on an inter-temporal comparison of the decile distributions of income for 1964 and 1970, she finds that "the relative distribution of income remained essentially unchanged during the rapid growth phase of the Korean economy" and that "there is little question that the post World War II economic history of South Korea resulted in a development process which not only benefited upper and middle income groups but also substantially raised the welfare of the poorest members of society."[36/]

The data sources of Professor Adelman's work are the wage survey, farm household income surveys, and adjusted distribution of non-agricultural self-employed and property income following the IBRD consultant report by C. Morrison. Other than a very brief description of data sources as noted above, the original report by the IBRD consultant was beyond this reporter's access, given the time constraint. One interesting feature of Adelman's work is that it attempts to explain the causes or sources of relative distributive equity in Korean historical perspective, an approach that deserves attention in a country or comparative study of income distribution.

As we have noted, there seems to be no solid empirical study on income distribution in Korea. The main reason for the lack of such

studies in Korea is the inadequacy of available data on household income surveys, a topic to which we shall turn our attention in the following chapter.

II. AVAILABILITY AND PROBLEMS OF DATA

As compared to most developing countries, data availability for Korea, the Philippines and Taiwan is relatively good although there are some differences in the years of surveys and definitions and classifications being adopted in each country. In the following analysis, an effort is made to follow the guidelines presented in the memorandum prepared by Richard J. Szal of Brookings Institute.[37/] However, in writing this report, it was necessary to make some modifications.

In this section, we will first examine the availability of data directly relevant to size distribution of income and problems with data sources. These data are primarily household income and expenditure surveys and, perhaps, population censuses containing questions on individual or household income. Strengths, weaknesses, and gaps in these data will be pointed out. We will also make some suggestions for improvement. Then, price and fiscal data will be examined including taxation incidence and government expenditure data. The section on peripheral and general data will be very brief, only attempting to evaluate the possibility of further breakdown of size distribution of income and of consistency checks.

1. Existing Data for Constructing Size Distribution of Income

The basic data for constructing size distribution of income are available in publications for Korea, the Philippines and Taiwan. In

Korea, the Bureau of Statistics of the Economic Planning Board, since 1963 has compiled and published an annual report on the family (city) income and expenditure and the Ministry of Agriculture and Fisheries has conducted a farm-household economy survey since 1962. The family income and expenditure survey has been made every five years since 1956/57 in the Philippines by the Bureau of the Census and Statistics, Department of Commerce and Industry. The Department of Budget, Accounting and Statistics of the Taiwan Provincial Government conducted a survey of family income and expenditure including personal income distribution every other year from 1964 to 1970 and annually since then. All of these countries have population censuses without much useful information with regard to individual or household income and wealth. Since they do differ in various degrees in definitions, in survey years, in the extent of coverage sample, in the items and classifications, and in other aspects, we will examine existing data for each country separately.

A. Korea

The family income and expenditure survey by the Bureau of Statistics [BOS][38/] covers 32 urban areas sampled in a ratio of 1/1,200 or 1,579 households for 1972. The procedure used is stratified two-stage cluster sampling. In this survey, farm and fishery households, single-person households, households having difficulty separating business and household activities, and households with income exceeding 2 million won per year are excluded from the population. Income in this survey is defined as the receipts of a household from various sources such as earnings, interest, dividend, rent, imputed rent, value of home produce, profits

from business, gifts, assistance and relief, and others. Therefore, income defined for the survey differs somewhat as compared to that of national income accounts. The published survey contains the breakdowns, by seven income classes, by size of family, by six occupational classes and by age groups of household head.

Since the survey by BOS covers city households engaged in non-agricultural activities, it needs to be supplemented by the results of the farm household economy survey by the Ministry of Agriculture and Fisheries.[39] The survey as modified in 1961 takes as its population all the farm households cultivating 1 danbo[40] or more. The procedure used is stratified 3-stage random sampling and some 1,180 farm households or 0.5% of all farm households are included in the survey. Farm income is defined as the residual of gross income after agricultural operating expenses, plus income from sideline business and other sources of income included in the city household survey. There are summary tables for family sizes of farm households, by educational background of family members and by employment status of family members with cross-classification by area of cultivated land. Unfortunately, there is no breakdown by the size of income per household. The best one can do here is to assume there is a positive correlation between the size of cultivated land and size of income.

By combining the two surveys, namely the city household survey and the farm household economy survey, with an assumption of a positive relationship between cultivated land and income, it would be possible to construct the size distribution of income. However, some gaps seem

to exist because of the coverages of the two surveys. First, neither of the surveys covers non-farm households with income exceeding 2 million won per year and single-person household. Secondly, non-farm households in cities and townships (up),[41] and in rural areas are excluded from the city household survey. Thirdly, there are a number of small farmers, cultivating less than 1 danbo, who are excluded from the farm household economy survey, though their relative importance would be rather marginal. These deficiencies in city and rural household surveys tend to result in a bias toward an overrepresentation of those nearer the mean of the size distribution of income by eliminating the representation of households in the two extreme income classes. Unless supplementary surveys to bridge these gaps are conducted, the resulting size distribution of income would be only an approximation at best.

As for deriving data for an intertemporal study, it would be possible for the period after 1963. If such data become necessary for the years before 1963, somewhat inconsistent data are available for farm households since 1954 and for city households since 1954, with extremely limited samples.

Since there is racial homogeneity in Korea, an ethnic breakdown of income distribution holds no significance. The rural/urban classification has already been made in the two surveys. Without re-editing the computor tapes for the farm household survey, regional distribution of farm income is not readily available. Even after such an effort, one would obtain only a crude regional distribution of non-farm income, since the urban household survey includes only 32 chartered cities, excluding

all the towns or up. Both the IBRD and Professor Oshima checked the consistency of the results of these surveys and the survey by Chung-ang University and found it to be relatively good.[42/] However, some of the underlying assumptions in doing so need to be scrutinized in view of the existing gaps stated above.

B. Philippines

Unlike the Korean household surveys, the Philippine BCS survey of households includes farm and non-farm households as its population. The sample size is much larger than that for Korea, about 11,600 farm and non-farm households or 0.18 percent of all the households. The definition of urban area is somewhat unique in the Philippines. It is defined as an area meeting the following requirements:[43/]

1. In their entirety, all cities and municipalities which have a population density of at least 1,000 person per kilometer, except the city of Cebu;

2. Poblaciones or central districts of municipalities and cities with a population density of at least 500 persons per square kilometer;

3. Poblaciones or central district regardless of population size, which have the following:

   a. A street pattern;

   b. At least six commercial and industrial establishments;

   c. At least three of the following:

      (1) A town hall or a church or chapel having religious service at least once a month;

      (2) A public plaza, a park or a cemetery;

      (3) A market place or a building where trade activities are carried on at least once a week; and

(4) A public building like a school, a hospital, a puericulture or health center or a library.

4. Barrios having at least 1,000 inhabitants which meet the conditions in 3 and who are predominantly in non-farming and -fishing.

All other areas that do not meet the above requirements are considered to be rural. It is only the Philippines which has such a precise definition. In both Korea and Taiwan, the urban/rural distinction is based on administrative classifications. Therefore, this definitional difference should be born in mind in future comparative studies of the Philippines and other countries.

The definition of income adopted in the Philippines survey is also somewhat unique. In addition to income from work, income from other sources includes profits from sales of stocks and bonds, backpay and proceeds from insurance, net winnings from gambling, sweepstakes or lotteries, and inheritance during the past 12 months in cash or converted to cash during the same period, along with other things normally included in household surveys such as gifts, support, assistance and relief, pensions or retirement benefits, and imputed rents.[44/]

The published report contains various classifications and breakdowns of household income, sufficient to construct size distributions of income. There are fourteen income classes. Families are classified by income class, by size of family, by urban or rural residence, by occupation, by educational background of head of household, and by region. The report even contains the decile distribution of income in terms of relative shares and average income for each decile class for 1961, 1965 and 1971.[45/]

The household income and expenditure surveys are available for the years 1956-57, 1961, 1965 and 1971. However, the first survey for 1956-57 seems to have a significant degree of inconsistency and the latter three bench-mark years are more extensively used in intertemporal studies of the Philippines. Although the racial composition of the Philippines is far more complex than in the case of Taiwan or Korea, their racial problem is not so acute as compared to some other Southeast Asian Countries, and there is no reference to income by ethnic groups.

An anonymous member of IBRD evaluated the two survey reports for 1961 and 1965 and found them to be reliable by comparing the survey results against national accounts data and other peripheral data.[46/] The consistency of data could seemingly be further improved should the original data tapes be accessible for future research effort.

Another useful information source for income distribution of this country would be the 1968 National Demographic Survey jointly conducted by the University of the Philippines Population Institute and the Bureau of the Census and Statistics. Although the results of this survey are widely used in many recent economic and demographic studies,[47/] it seems that these results are not made widely available in publication form. However, Encarnacion and others referred to and commented on the contents and reliability of this survey.[48/] The survey covers a nation-wide stratified random sample of 7,237 households, 97.7 percent of which are relatively "complete". The questionnaire used in this survey consists of four blocks: income, labor, fertility and social inability. Should data of this survey be reasonably accurate, it would certainly broaden

the possibilities for future research on income distribution.

Unfortunately, however, the general accuracy of this survey has been seriously challenged. Carazon Raymundo contends that the results of a post-enumeration survey have not been examined systematically to date and that initial tabulations show sizeable proportions of households with unmatched responses.[49/] Besides, Encarnacion and others assert, based on their checks, that income data of the National Demographic Survey could have under-reported by about 12 percent on the average and that the major cause is the undercoverage of income in kind, so that rural income is more seriously understated than that of urban areas.[50/] Therefore, as aptly described by Professor Raymundo, "these incomplete results counsel caution in the analysis of the survey results."

C. Taiwan

The Taiwanese survey of family income and expenditure seems to be the best of the three countries in many respects.[51/] The sample size for 1971 is about 4,500 households or 0.19% of all households. Farm and non-farm households are grouped into 23 different income classes. Income of households includes wages and salaries, property income inclusive of investment income, mixed income (net operations surplus and professional income), gifts and transfer receipts, and other miscellaneous receipts. Farm and non-farm income is classified by the number of employed, by family size, by age of head of household, by sex, by industry, by occupation, by region, and by educational background of household head.

The Taiwanese report contains three items of particular interests. First, the number of persons employed is retabulated to show it in terms

of the number of male adult unit by giving different weights to different age groups and to sex. Secondly, the survey questionnaire includes a section asking the possession of various modern household equipment and appliances. These data are tabulated by region and by income class. Thirdly, the survey report presents the decile and quintile distributions of income and cross-section and intertemporal analysis of them for 1964, 1966, 1968 and 1970-72.[52/]

A rough consistency check indicates that the Taiwanese data is more consistent than that of the Philippines. Salaries and wages in the household survey seem to be somewhat underestimated by about 30% while mixed income shows an overestimation of about 19% as compared to national accounts figures. As usual, property income of the household survey is grossly underestimated. For this reason, Kuo concludes that there is possible underestimation of income in higher income brackets.[53/] It would be possible to narrow the gap between the figures of household survey and national accounts by combining the disaggregated figures of the two. It is extremely difficult, however, to determine the distribution of underestimated property income.

2. Price and Wealth-Holdings Data

In all the countries within the region of this survey, there are both consumer and wholesale price indices available which have a considerable degree of consistency and which cover a long period of time concurrent with the surveys of household income and expenditures.[54/] However, there is no definite concept of "the low-end poverty" or "poverty levels" for these countries.[55/] Given an arbitrary definition of "the

low-end poverty" either in terms of the bottom 40 percent of income class or in terms of an absolute amount of income, an analysis for poverty group by occupation or by income class may be carried out by relating the data from household expenditure surveys with price data. This type of analysis would be a relatively easy exercise for the Philippines and for Taiwan, but would be somewhat difficult for Korea because of the nature of its household survey.

The availability of wealth holdings data is very limited for these countries. In Korea. a national wealth survey was conducted for 1968, which provides regional breakdown of household wealth.[56/] But, there is no readily available breakdown of household wealth by value of household asset holdings. Retabulation from the computer tape is necessary to derive this type of information. As noted in the previous section, the tabulation of modern household equipment and appliances by region and by income class is available in Taiwan. Assuming the list of 23 items of electrical and other appliances as representative of household wealth holdings, an approximation of tangible wealth holdings could be computed by applying appropriate prices for these items. Although there is currently extensive interest in the Philippines in deriving social development indicators,[57/] to the knowledge of this reporter no statistics are readily available for wealth holdings.

3. Taxation and Government Expenditure Data

Taxation statistics and government expenditure data are available for all the three countries.[58/] However, government expenditure data for Taiwan is classified as confidential under the current political

situation. This restriction should be noted in proposing research dealing with government expenditure. The most complete set of fiscal data is available for the Philippines including taxable income data[59] which is not available for either Korea or Taiwan. Besides, as noted earlier, there are taxation and expenditure incidence studies for the Philippines. To this reviewer's knowledge, no government expenditure incidence studies exist for Korea or Taiwan at the level of sophistication of the Philippines studies.

Considering the availability of taxation and government expenditure data for Korea, an attempt to estimate the magnitude of taxation and government expenditure incidence might be possible to some degree of success. Furthermore, such an attempt may be cross-checked against the transfer receipts and tax payment data from household surveys. For Taiwan, unless it is possible to make a special arrangement with the Taiwanese government, incidence study efforts would run into irresolvable stumbling blocks.

4. Peripheral and General Data Sources

The fact that these three countries have national income accounts data of relatively high quality as compared to many other developing countries implies the availability of reasonably consistent series of peripheral and other data, of course, with varying degrees of accuracy. Since what is called "general data" in the guidelines for this review may fall under "peripheral data", we will first examine the availability of "general data" for these countries.

Tables 5-7 represent the "general data" series available. As noted in the tables, unavailable statistical series are technical manpower surveys for the Philippines and Taiwan.

The reliability of available data in these categories differs from one country to another. For example, quality and breakdown of property income seems to be the best for Taiwan, certainly as compared to that of the Philippines. In the case of Korea, all of the manpower related data exist. However, the quality and consistency of economically active population and employment data is somewhat questionable.

Turning to the availability of so-called "peripheral data", numerous variations are available in these countries. Particularly for the Philippines and Taiwan, agricultural statistics, including crop production and average data, and data on size of land holdings, is abundant and seems to be consistent.[60/] Even for the non-agricultural sector, the censuses in Taiwan and the Philippines encompass all non-agricultural activities, unlike the Korean mining and manufacturing census.

Even breaking the non-agricultural sector down into "modern" and"traditional" segments for any given year seems to be possible for Taiwan and the Philippines. The Philippine economic census of 1971 has a report on small establishments which are not covered in the ordinary censuses of establishments with 5 employee or more.[61/] In case of Taiwan, the industrial and commercial census does not exclude establishments with a smaller number of employees. The Korean Bureau of Statistics included in the 1973 census a sample of firms with less than 5 employees in mining, manufacturing, and electricity, gas and water. But, the gap in the Korean census remains, for other non-agricultural sectors.

It seems somewhat difficult, even given with the guidelines for this report, to assess further the availability of peripheral data for consistency checks unless the consistency checks required are specified. Therefore, I conclude with this note: should one be given reasonably sufficient support for consistency checks, the quality and availability of peripheral and general data for such a purpose is sufficient, not to impair the quality of intensive country studies as far as Korea, the Philippines and Taiwan are concerned.

Table 5. Related Data Available in Korea

Statistical Series	Year available from or years available	Compiling Agency
1. Manpower Related Data		
a. Economically Active Population Surveys	Since 1963	Economic Planning Board, (Seoul)
b. Employment Surveys	Since 1963	Economic Planning Board
c. Technical Manpower Surveys	Every two years since 1967	Ministry of Science & Technology (Seoul)
d. Education and Training Statistics	Since 1962	Ministry of Education
e. Wage Surveys	Since 1970	Office of Labor (Seoul)
2. General Data		
a. National Accounts Data	Since 1953	Bank of Korea (Seoul)
i) Functional Categories	Since 1953	
ii) Quality of Breakdown of Property Income	(reasonably good)	
b. Population Census	1955,1960,1966,1970	Economic Planning Board
c. Censuses (or Surveys) of Manufacturing	1960, 1963, 1966	
	Every year since 1968	Economic Planning Board
d. Agricultural Output Surveys	Since 1952	Ministry of Agriculture and Forestry (Seoul)
e. Input-Output Data	1960,1963,1966,1970	Bank of Korea

Table 6. Related Data Available in Philippines

Statistical Series	Year available from or years available	Compiling Agency
1. Manpower Related Data		
a. Economically Active Population Surveys	Since 1956	Bureau of the Census and Statistics (Manila)
b. Employment Surveys	Since 1956	"
c. Technical Manpower Surveys	N/A	---
d. Education and Training Statistics	Since 1951-52	Department of Education (Manila)
e. Wage Surveys	1952	Central Bank of the Philippines (Manila)
2. General Data		
a. National Accounts Data	Since 1946	Office of Statistical Coordination & Standards, National Economic & Development Authority (formerly National Economic Council), Manila
i) Functional Categories	Since 1946	
ii) Quality and Breakdown of Property Income	(reasonable)	
b. Population Census	1950,1960,1970	Bureau of the Census and Statistics
c. Census (or Surveys) of Manufacturing	1948,1961,1967	"
d. Agricultural Output Surveys	Since 1946	Department of Agriculture & Natural Resources (Manila)
e. Input-Output Data	1961, 1965	Bureau of the Census and Statistics

Table 7. Related Data Available in Taiwan

Statistical Series	Year available from or years available	Compiling Agency
1. Manpower Related Data		
a. Economically Active Population Surveys	Since 1963	Provincial Government of Taiwan (Taipei)
b. Employment Surveys	Since 1963	"
c. Technical Manpower Surveys	N/A	N/A
d. Education and Training Statistics	Since 1946	Department of Statistics Ministry of Education, (Taipei)
e. Wage Surveys	Since 1971 (?)	Directorate-General of Budget, Accounting and Statistics [DGBAS] Executive Yuan
2. General Data		
a. National Accounts Data	Since 1951	DGBAS, Executive Yuan (Taipei)
i) Functional Categories	Since 1951	
ii) Quality and Breakdown of Property Income	(relatively better)	
b. Population Census	1956, 1966,1970 (Sample)	Census Office, Executive Yuan, Industrial & Commercial Census of Taiwan [ICCT], (Taipei)
c. Censuses (or Surveys) of Manufacturing	1954,1961,1966,1970 (under compilation)	The Commission of ICCT
d. Agricultural Output Surveys	Since 1952	Bureau of Statistics, Ministry of Econ. Affairs (Taipei)
e. Input-Output Data (1)	1964,1966,1969,1971 (under compilation)	Economic Planning Council, Executive Yuan (formerly Council for Int'l Economic Corp. & Development, Executive Yuan),(Tapei)

Note: (1) See also, John Shih-yao Chin, The Taiwan Economy: An Input-Output Study, (November 1968)

III. SOME SUGGESTIONS FOR FUTURE RESEARCH

Based on this review of existing studies on income distribution and data availability, an in-depth study of any of the topics preliminarily discussed at last year's Princeton workshop would be a worthwhile project for Korea, the Philippines or Taiwan. Certainly, the awareness of the problems of income distribution among economists and policy makers in these countries exists and they are eagerly waiting feasible policy recommendations to solve these problems. However, as noted by Professor Simon Kuznets,[62] when a new problem arises, we never have the data for it, no matter how much data we had before. In suggesting the lines for future research, this theme needs to be advanced further.

1. Although there are numerous studies and quantitative measures of income distribution available, to date no studies have established the level of tolerable income disparity considering the differences in life in urban and rural areas, educational background, number of working members of a family, and other relevant factors. The measures for income disparity we are exposed to are those of averages deviating from the ideal norm, which is non-existent in the real world. Should there be policies introduced to remedy inequity, what will be the standard used to evaluate the effectiveness of these policy measures? It should not be the 45 degree line of the Lorenz diagram. Therefore, the construction of an auxiliary Lorenz curve allowing for an inevitable and tolerable degree of inequity due to the factors mentioned above should precede any serious research on income distribution.

2. It seems that the concept of income adopted in all the studies adheres to the definition of income within the framework of national income accounts. To an individual, capital gains from real estate or stocks does constitute a part of his "disposable" income as well as his earnings. It seems that a major source of income disparity stems from an uneven distribution of assets. Without fully accounting for this source of income inequity, the problems of income distribution will continue to exist as long as the institution of private ownership exists and even to some degree in socialist societies. Therefore, a new definition of income needs to be formulated, which would be appropriate and meaningful at the disaggregated household level.
3. The consideration of the problems of income distribution implies a stride toward linking the neglected connection between economic growth and improvements in welfare. If this is the case, then the problem of income distribution should not only include income inequity, but be extended to such relevant matters as housewives' contribution, value of leisure, environment and sanitary considerations, public goods, unpaid family workers, and other goods and services that do not go through the channel of the market. In this respect, the concept of net national welfare advanced in Japan [63/] or net beneficial product proposed in the Philippines[64/] should be incorporated in future research efforts. Also in formulating future research plans, priorities need to be established among various aspects of the distributive problems. Such a formulation should, of course, fully reflect specific

and particular conditions of an individual economy as well as the generally prevailing situation in less developed countries.

4. Even with some unresolved questions aforementioned and problems associated in available data, there are a number of interesting policy-oriented research that may be further explored in view of the past records of these geographically proximate countries.

   (a) In conjunction with fiscal policy and income redistribution, the Philippines would be an appropriate case since there have been some indigenous efforts to evaluate the effects of tax policy on income redistribution. In Taiwan, as noted earlier, the limited accessibility of tax data would pose a serious data problem in an effort to undertake this type of study.

   (b) Considering recent growth performances of Korea and Taiwan, a comparative study on the relation between industrialization and income redistribution may be another worthwhile and feasible area of future research. Both countries have vigorously pursued export promotion policies and have demonstrated very high rates of economic growth, while showing some contrasts in their industrial structure. In addition, a few monographs dealing with export policies of Korea exist,[65/] which will serve as an excellent point of departure for such a research. It would also provide an empirical test for Kuznets' hypothesis on income distribution in the context of recent development of

LDC's. This type of study may be incorporate with the consideration of labor policy as well.

(c) Both policy instruments for rural redistribution and public works for low-end poverty would be attractive research topics, noting the awareness of policy makers and planners of the three countries. However, recent emphases in these directions limit the availability of published data and primary data gathering needs to proceed research in these areas. Unless one is interested in assessing short-term effects of these policy measures, primary research effort in these areas would bear little fruits.

(d) Recent drastic decline in population growth rate in Korea may provide the possibility of conducting a case study on population policy and income distribution. Currently, the United Nations is financing an extensive fertility survey in Korea in collaboration with the International Statistics Institute, in which some socio-economic aspects are being questioned. However, noting the problems in income distribution data for Korea, it would be extremely difficult to relate the effects of population policy to income distribution.

(e) Distributive aspects of urban land policy would be an interesting study, should the necessary data be available. But, to obtain urban land prices for a specific piece or area in any city over time would be an insurmountable task.

FOOTNOTES

1/ Harry T. Oshima, "Income Inequality and Economic Growth: the Post-war Experience of Asian Countries", Malaysian Economic Review, Vol. 15, (October, 1970).

2/ H. Chenery, John Duloy and Richard Jolly, eds., Redistribution with Growth. (Oxford University Press, 1974)

3/ Oshima, "Income Inequality", p. 10.

4/ The Institute of Social Science, Chung-Ang University, Income Distribution and Consumption Structure in Korea, (Seoul, Korea: Dec. 1966).

5/ Abstracted from Oshima's Table 2.

6/ Oshima, "Income Inequality," p. 34.

7/ Ibid., p. 24.

8/ Chenery, et al., Redistribution with Growth, p. 8-9, Table I. 1, and p. 42, Table II. 1.

9/ Ibid., p. 7.

10/ Ibid., p. 42, Table II. 1.

11/ Christina P. Parel, "Distribution of Family Income in the Philippines," The Philippine Statistician, Vol. 18 (1969), pp. 1-19

12/ Ibid., p. 14.

13/ Tiko A. Mijares and L. C. Belarmino, "Some Notes on the Sources of Income Disparities among Philippine Families," Journal of Philippine Statistics, Vol. 24, (September 1973) pp. xv-xxii.

14/ Ibid., p. xviii.

15/ Ibid., p. xix.

16/ Joint Legislative - Executive Commission, A Study of Tax Burden by Income Class in the Philippines, (Manila: December, 1966)

17/ Ibid., p. 62; and, also, a summary by Ruben F. Trinidad, "Tax Policies and their Influence on Income Distribution: The Philippine Experience," (Mimeographed Paper, 197 , p. 10.

18/ Ibid.

19/ Joint legislative Tax Commission, A Study, p. 94.

20/ Trinidad, "Tax Policies," pp. 12-15.

21/ National Tax Research Center, A Study of Tax Burden by Income Class in the Philippines, An Initial Report, (Mimeographed, February 11, 1974).

22/ International Labor Organization, World Employment Programme, A Research Report on Its Research-Oriented Activities, (December, 1973).

23/ José Encarnacion, Income Distribution in the Philippines: The Employed and the Self-Employed, Geneva: I.L.O., October 1974).

24/ Edita Tan, Philippine Taxation, Government Spending and Income Distribution, (Geneva: I.L.O., to be completed in February, 1975).

25/ Shirley W. Y. Kuo, The Economic Structure of Taiwan, 1952-1969, (Taipei: Graduate Institute of Economics, National Taiwan University, December, 1970), p. 94.

26/ Ibid., p. 96.

27/ J. J. Liu, Income Distribution and Economic Growth in Taiwan, Mimeographed (in Chinese), 197 .

28/ Abstracted from Ibid., Appendix Table I.

29/ The Institute of Social Science, Income Distribution, op. cit.

30/ Ibid., p. 36.

31/ Oshima, "Income Inequality," p. 14. In contrast, the Report by Chung-ang University reads: "...we did a cross-section survey for the months through January and March 1966", Income Distribution, p. 87.

32/ Ibid., pp. 18-25.

33/ Ibid., p. 7, Table II-1.

34/ There seem to be some modifications in the process of preparing the reports in Korean and English. In the Korean version of this report, it is shown as such on page 29, but not in the English version.

35/ Irma Adelman, "South Korea" in Chenery, et. al., Redistribution with Growth, Annex, pp. 280-5.

36/ Irma Adelman, "Redistribution with Growth: The Case of Korea", (IBRD, Mimeographed draft, December 1973) p. 19.

37/ Richard Szal, "Notes on Regional Papers to be done in Connection with Joint Brookings-Princeton Project on Income Distribution in LDC's," (Washington: December, 1973, mimeographed).

38/ Bureau of Statistics, Economic Planning Board, Annual Report on the Family Income and Expenditure Survey, 1972, (Seoul, Korea: 1973).

39/ Ministry of Agriculture and Fisheries, Report on the Results of Farm Household Economy Survey, 1972 (Seoul, Korea: 1973).

40/ 1 danbo = .099 hectare.

41/ According to the 1970 Population Census, there are 91 ups with some 505.8 thousand households or 8.6% of the total households living in a mode of half-urban and half-rural.

42/ Oshima, "Income Inequality," p. 38; International Bank for Reconstruction and Development, "Data Paper on Korea", (IBRD, mimeographed).

43/ Bureau of the Census and Statistics, Family Income and Expenditures, 1971, (Manila, Philippines: 1972) p. xiii.

44/ Ibid., p. xi.

45/ Ibid., p. xxi.

46/ International Bank for Reconstruction and Development, "Data Paper on the Philippines," (IBRD, mimeographed).

47/ For examples, J. Encarnación, Jr., and others, Studies in Philippine Economic-Demographic Relationships, (Manila: 1974); and J. Encarnación, Jr., "Income Distribution in the Philippines," op. cit.

48/ Encarnacion, et al., Studies, pp. 110-11.

49/ Corazon, Raymundo, "The Methodology of the 1968 NDS," in W. Flieger and P.C. Smith, (eds.), A Demographic Path to Modernity: Patterns of Early Transition in the Philippines, (University of the Philippines Press, 1974).

50/ Encarnación, et al., Studies, p. 111.

51/ Department of Budget, Accounting and Statistics, Report on the Survey of Family Income and Expenditure, Taiwan Province, 1972, (Taipei, Taiwan Provincial Government: 1973).

52/ Ibid., pp. 16-20 and pp. 52-3

53/ Kuo, The Economic Structure, p. 96.

54/

Consumer Price Index	Korea	since 1955
	Philippines	since 1957
	Taiwan	since 1953
Wholesale Prices	Korea	since 1950
	Philippines (for Manila)	since 1949
	Taiwan	since 1953

Sources: For Korea: - Economic Planning Board, Annual Report on Price Survey, (1967)

- Bank of Korea, Price Statistics Summary, (1961, 1964, 1966, 1968, 1970).

For Taiwan: - Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Commodity-Price Statistics Monthly Taiwan Districts, (Taipei: Raiwan, April 1974).

For Philippines: - Bureau of the Census and Statistics, BCS Monthly Bulletin of Statistics and, Philippine Statistics Yearbook, (Manila).

55/ In re-examining the Philippine data, there is a so-called consumer price index for low income families in Manila and suburbs for families with income not exceeding ₱ 200 a month, compiled by the Bureau of the Census and Statistics and a similar one for middle income families. But, unfortunately, this reporter did not obtain copies of them and is not in position to make further evaluation of them. (₱ = peso, 1 ₱ = US$, .14).

56/ Economic Planning Board, Report on National Wealth Survey, 1968, (Seoul, Korea; Aug. 1972).

57/ See Development Academy of the Philippines, Workshop on Statistical Methods for Social Indicators, (Manila: April, 1974); and Mahar Mangahas, "Creating Social Indicators for the Philippines," (mimeographed, January, 1974).

58/ Here again, the most recent publications are referred to. For Korea: Ministry of Finance, Summary of Financial Statistics for Fiscal Year 1972; Office of National Tax Administration, Statistical Yearbook of National Tax, 1972 and Ministry of Home Affairs, For the Philippines: Bureau of Internal Revenue, BIR Annual Report, 1972, General Auditing Office, Annual Statements, 1972, and Department of Finance, Monthly Bulletin. For Taiwan: Ministry of Finance, Yearbook of Tax Revenues, 1973, Yearbook of Financial Statistics of the Republic of China, 1973, Statistical Yearbook of National Tax, 1972.

59/ See for the sources, National Economic and Development Authority, List of Available Statistical Series in the Philippines, (Manila: 1974), pp. 113-121.

60/ National Economic Development Authority, list, pp. 19-39; Taiwan Forestry Bureau, Forestry Statistics of Taiwan, 1973; Provincial Government of Taiwan, Taiwan Agricultural Yearbook, 1973; and, Taiwan Food Statistics Book, 1973; Taiwan Sugar Corporation, Taiwan Sugar Statistics, 1972, (Taipei).

61/ Bureau of the Census and Statistics, Economic Census of the Philippines, 1967, Vol. IX: "Small Establishments Report", (Manila, 1973).

62/ Simon Kuznets, "Quantitative Economic Research: Funtions and Problems", a lecture delivered at Korea Development Institute, 1972, (mimeographed,) p. 4.

63/ Economic Council of Japan, Measuring Net National Welfare of Japan, 1973.

64/ Development Academy of the Philippines, Workshop, op. cit.

65/ Charles R. Frank, Jr., Kwang Suk Kim and Larry E. Westphal, Foreign Trade Regimes and Economic Development: South Korea, (under process of publication by National Bureau of Economic Research, (New York, 1974). See also, Larry E. Westphal and K. S. Kim, "Industrial Policy and Development in Korea", in Bela Balassa and others, Development Strategies in Semi-industrial Countries, (forthcoming).